SEQUENCE LISTING

<110> Chen, Jianzhu
Ge, Qing
Eisen, Herman

<120> Influenza Therapeutic

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<140> 10/674,159
<141> 2003-09-29

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attgggaagg tctgcaggac tttattagca aagtcggtat ttaacagctt gtatgcatct 1980

ccacaactag aaggattttc agctgaatca agaaaactgc ttcttatcgt tcaggctctt 2040

agggacaatc tggaacctgg gacctttgat cttgggggggc tatatgaagc aattgaggag 2100

tgcctaatta atgatccctg ggttttgctt aatgcttctt ggttcaactc cttccttaca 2160

catgcattga gttagttgtg gcagtgctac tatttgctat ccatactgtc caaaaaagta 2220

ccttgtttct act 2233

<210> 122
<211> 2183
<212> DNA
<213> Influenza virus type A PA segment

<400> 122
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aacaaatttg cagcaatatg cactcacttg gaagtgtgct tcatgtattc agattttcac 180

ttcatcgatg agcaaggcga gtcaatagtc gtagaacttg gcgatccaaa tgcacttttg 240

aagcacagat ttgaaataat cgagggaaga gatcgcacaa tagcctggac agtaataaac 300

agtatttgca acactacagg ggctgagaaa ccaaagtttc taccagattt gtatgattac 360

aagaagaata gattcatcga aattggagta acaaggagag aagttcacat atactatctg 420

gaaaaggcca ataaaattaa atctgagaag acacacatcc acattttctc attcactggg 480

gaggaaatgg ccacaaaggc cgactacact ctcgatgaag aaagcagggc taggatcaaa 540

accaggctat tcaccataag acaagaaatg gctagcagag gcctctggga ttcctttcgt 600

cagtccgaga gaggcgaaga gacaattgaa gaaagatttg aaatcacagg aacaatgcgc 660

aagcttgccg accaaagtct cccgccaaac ttctccagcc ttgaaaattt tagagcctat 720

gtggatggat tcgaaccgaa cggctacatt gagggcaagc tttctcaaat gtccaaagaa 780

gtaaatgcta gaattgaacc ttttttgaaa tcaacaccac gaccacttag acttccggat 840

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gaggacccaa gtcatgaggg agaggggata ccgctatatg atgcaatcaa atgcatgaga 960

acattctttg gatggaagga acccaatgtt gttaaaccac acgaaaaggg aataaatcca 1020

aattatcttc tgtcatggaa gcaagtactg gcagaactgc aggacattga gaatgaggag 1080

aaaattccaa ggactaaaaa tatgaagaaa acgagtcagt taaagtgggc acttggtgag 1140

aacatggcac cagaaaaggt agactttgac gattgtaaag atgtaggcga tttgaagcaa 1200

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aaggcatgtg aactgaccga ttcaagctgg atagagctcg atgagattgg agaagatgcg 1320

gctccaattg aacacattgc aagcatgaga aggaattatt tcacagcaga ggtgtctcat 1380

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tcctgtgcag caatggatga tttccaatta attccaatga taagcaagtg tagaactaag 1500

gagggaaggc gaaagaccaa tttgtacggt ttcatcataa aaggaagatc ccacttaagg 1560

aatgacaccg atgtggtaaa ctttgtgagc atggagtttt ccctcactga cccaagactt 1620

gaaccacaca aatgggagaa gtactgtgtt cttgaggtag gagatatgct tctaagaagt 1680

gccataggcc atgtgtcaag gcctatgttc ttgtatgtga ggacaaatgg aacctcaaaa 1740

attaaaatga aatgggggat ggaaatgagg cgttgcctcc ttcagtcact tcaacaaatc 1800

gagagtatga ttgaagctga gtcctctgtc aaggagaaag acatgaccaa agagttcttt 1860

gaaaacaaat cagaaacatg gcccgttgga gagtccccca aagtcggtat tcaacagctt 1920

gtatgcatct ccacaactgg aaggattttc agctgaatca agaaaactgc ttcttatcgt 1980

tcaggctctt agggacaacc tggaacctgg gacctttgat cttgggggggc tatatgaagc 2040

aattgaggag tgcctgatta atgatccctg ggttttgctt aatgcttctt ggttcaactc 2100

cttcctcaca catgcattga gatagttgtg gcaatgctac tatttgctat ccatactgtc 2160

caaaaaagta ccttgtttct act 2183

<210> 123
<211> 2233
<212> DNA
<213> Influenza virus type A PA segment

<400> 123
agcaaaagca ggtactgatc cgaaatggaa gaatttgtgc gacaatgctt caatccgatg 60

attgtcgagc ttgctgaaaa agcaatgaaa gagtatggag aggatcggaa aatcgaaaca 120

aacaaatttg cagcaatatg cactcacttg gaagtatgct tcatgtattc agattttcat 180

ttcatcaatg agcaaggcga gtcaataata gtagagcttg atgatccaaa tgcacttttg 240

aagcacagat ttgaaataat agagggaaga gatcgcacaa tggcctggac agtagtaaac 300

agtatttgca acactacagg agctgagaaa ccgaagtttc tgccagattt gtatgattac 360

aaggagaata gattcatcga gattggagtg acaaggaggg aagtccacat atactatctt 420

gaaaaggcca ataaaattaa atctgagaag acacacatcc acattttctc attcactggg 480

gaagaaatgg ccacaaaggc cgactacact ctcgatgagg aaagcagggc taggatcaag 540

accagactat tcaccataag acaagaaatg gctagcagag gcctctggga ttcctttcgt 600

cagtccgaaa gaggcgaaga aacaattgaa gaaagatttg aaatcacagg gacaatgcgc 660

aggctcgccg accaaagtct cccgccgaac ttctcctgcc ttgagaattt tagagcctat 720

gtggatggat tcgaacccaa cggctacatt gagggcaagc tttctcaaat gtccaaagaa 780

gtaaatgcta aaattgagcc ttttctgaaa acaacaccaa gaccaattaa acttccggat 840

gggcctcctt gctctcagcg gtccaaattc ctgctgatgg atgctttaaa attaagcatt 900

gaggacccaa gtcacgaagg agagggaata ccactatatg atgcgatcaa gtgtatgaga 960

acattctttg gatggaaaga accctatgtt gttaaaccac acgataaggg aataaatcca 1020

aattatctgc tgtcatggaa gcaattactg gcagaactgc aggacattga gaatgaggag 1080

aagattccaa gaaccaaaaa catgaagaaa acgagtcagc taaagtgggc acttggtgag 1140

aacatggcac cagagaaggt agactttgac gactgtagag atataagcga tttgaagcaa 1200

tatgatagtg atgaacctga attaaggtca ctttcaagct ggatccagaa tgagttcaac 1260

aaggcatgcg agctgaccga ttcaatctgg atagagctcg atgagattgg agaagatgtg 1320

gctccaattg aacacattgc aagcatgaga aggaattact tcacagcaga ggtgtctcag 1380

tgcagagcca cagaatatat aatgaagggg gtatacatta atactgcctt gcttaatgca 1440

tcctgtgcag caatggacga tttccaacta attcccatga taagcaaatg tagaactaaa 1500

gagggaaggc gaaagaccaa tttatatggt ttcatcataa aaggaagatc tcacttaagg 1560

aatgacaccg acgtggtaaa ctttgtgagc atggagtttt ctctcactga cccaagactt 1620

gagccacaca aatgggagaa gtactgtgtt cttgagatag gagatatgct actaagaagt 1680

gccataggcc aggtgtcaag gcccatgttc ttgtatgtga ggacaaatgg aacatcaaag 1740

attaaaatga aatggggaat ggagatgagg cgttgcctcc ttcagtcact ccaacaaatc 1800

gagagtatga ttgaagccga gtcctctgtc aaggagaaag acatgaccaa agagtttttc 1860

gagaataaat cagaaacatg gcccattgga gagtccccca aaggagtgga agaaggttcc 1920

attgggaagg tctgcaggac tttattagcc aagtcggtat tcaatagcct gtatgcatct 1980

ccacaattag aaggattttc agctgaatca agaaaactgc ttcttgtcgt tcaggctctt 2040

agggacaatc ttgaacctgg gacctttgat cttgggggc tatatgaagc aattgaggag 2100

tgcctgatta atgatccctg ggttttgctt aatgcgtctt ggttcaactc cttcctaaca 2160

catgcattaa gatagttgtg gcaatgctac tatttgctat ccatactgtc caaaaaagta 2220

ccttgtttct act 2233

<210> 124
<211> 2209
<212> DNA
<213> Influenza virus type A PA segment

<400> 124
atggaagatt ttgtacgaca atgctttaat ccgatgattg tcgaacttgc ggaaaaggca 60

atgaaagagt atggagagga tcttaaaatc gaaacaaaca aatttgcagc aatatgcact 120

cacttggaag tatgcttcat gtattcagat tttcatttca tcaatgagca aggcgagtca 180

atagtggtag aacttgatga tccaaatgca cttttgaagc acagatttga aataatagag 240

ggaagagacc gcacaatggc ctggacagta gtaaacagta tttgcaacac cacaggagct 300

gagaaaccga agtttctgcc agatttgtat gattacaagg agaatagatt catcgagatt 360

ggagtgacaa ggagagaagt ccacatatac taccttgaaa aggccaataa aattaaatct 420

gagaatacac acatccacat tttctcattc actggggaag aaatggccac aaaggccgac 480

tacactctcg atgaggaaag cagggctagg atcaaaacca gactattcac cataagacaa 540

gagatggcca acagaggcct ctgggattcc tttcgtcagt ccgaaagagg cgaagaaaca 600

attgaagaaa gatttgaaat cacagggaca atgcgcaggc ttgccgacca aagtctcccg 660

ccgaacttct cctgccttga gaattttaga gcctatgtgg atggattcga accgaacggc 720

tacattgagg gcaagctttc tcaaatgtcc aaagaagtga atgcaaaaat tgaacctttt 780

ctgaaaacaa caccaagacc aattagactt ccggatgggc ctccttgttt tcagcggtcc 840

aaattccttc tgatggatgc tttaaagtta agcattgagg atccaagtca cgagggggag 900

ggaataccac tatatgatgc gatcaaatgc atgagaacat tttttggatg gaaagaaccc 960

tatattgtta aaccacacga aaaggggata aatccaaatt atctgctgtc atggaagcaa 1020

gtactggcag aactgcagga cattgaaaat gaggagaaaa ttccaagaac taaaaacatg 1080

aagaaaacga gtcagctaaa gtgggcactt ggtgagaaca tggcaccaga gaaggtagac 1140

tttgacaact gtagagacgt aagcgatttg aagcaatatg atagtgacga acctgaatta 1200

aggtcacttt caagctggat ccagaatgag ttcaacaagg catgcgagct gaccgattca 1260

acttggatag agctcgatga gattggagaa gacgtggctc caattgaata cattgcaagc 1320

atgagaagga attacttcac agcagaggtg tcccattgca gagccacaga atatataatg 1380

aaggggtat acattaatac tgccttgctt aatgcatcct gtgcagcaat ggacgatttc 1440

caactaattc ccatgataag caagtgtaga actaaagaag gaaggcgaaa gaccaattta 1500

tatggcttca tcataaaagg aagatctcac ttaaggaatg acaccgacgt ggtaaacttt 1560

gtgagcatgg agttttctct cactgacccg agacttgagc cacacaaatg ggagaaatac 1620

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atgaggcgtt gcctccttca gtcactccaa caaatcgaga gtatgattga agccgagtcc 1800

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gagtcaagaa aactgcttct tgtcgttcag gctcttaagg acaatcttga acctggaacc 2040

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ttgcttaatg cgtcgtggtt caactccttc ctaacacatg cattaagata gttgtggcaa 2160

tgctactatt tgctatccat actgtccaaa aaagtacctt gtttctact 2209

<210> 125
<211> 2233
<212> DNA

<213> Influenza virus type A PA segment

<400> 125

agcaaaagca ggtactgatc caaaatggaa gactttgtgc gacaatgctt caatccaatg 60

attgtcgagc ttgcggaaaa gacaatgaag gagtatgggg aagatccgaa gattgaaaca 120

aacaagttcg ctgcaatatg cacacactta gaagtctgct tcatgtattc agacttccat 180

ttcattgacg aacgaggcga atcaataatt gtggaatctg gtgatccgaa tgcattgttg 240

aaacaccggt ttgaaataat tgaaggaaga gaccgagcaa tggcctggac agtggtgaat 300

agcatctgca acaccacagg agtcgataaa cccaaatttc ttccggatct atacgactac 360

aaggaaaacc gattcactga aattggtgtg acacggaggg aagttcatat atattactta 420

gagaaagcta acaagataaa atccgagaaa acacatatcc acatcttctc attcactgga 480

gaagaaatgg ccactaaagc tgactacacc cttgatgaag agagcagggc aagaatcaaa 540

accagactat tcaccataag acaggaaatg gcaagcaggg gtctatggga ctcctttcgt 600

cagtccgaga gaggcgaaga gacaattgaa gaaagatttg aaatcacagg gaccatgcgt 660

aggcttgccg accaaagtct cccacctaac ttctccagcc ttgaaaactt tagagcctat 720

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gtgaacgcca gaattgagcc atttctgaag acaacaccac gtcctctcag attgcctgat 840

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gaggacccga gccatgaggg ggaggggata ccgctatatg atgcgatcaa atgcatgaaa 960

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aatatggcac cggaaaaagt ggactttgag gattgcaaag acattgatga tctgaaacag 1200

taccacagtg atgagccaga gcttagatcg ctagcaagct ggatccagaa tgagttcaac 1260

aaggcatgtg aattgaccga ttcgagctgg atagaacttg atgagatagg ggaagatgtt 1320

gccccaattg agcacattgc aagtatgaga aggaactact tcacagcgga ggtgtcccat 1380

tgcagggcta ctgagtacat aatgaagggg gtttacataa atacagcttt gctcaatgca 1440

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gaaggaagga ggaggacaaa cctgtatggg ttcattgtaa aaggaaggtc ccatttgaga 1560

aatgatactg acgtggtgaa ctttgtgagt atggaattct cccttactga cccaaggctg 1620

gagccacaca aatgggaaaa gtactgtgtt cttgaaatag gggaaatgct cttgcggact 1680

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attaagatga aatgggggat ggaaatgagg cgctgccttc ttcaatctct tcaacagatt 1800

gagagcatga tcgaggctga gtcttctatc aaagagaaag acatgaccaa agaattcttt 1860

gaaaacagat cggagacatg gccaattgga gagtcaccta agggagtgga ggaaggctcc 1920

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agggacaacc tggaacctgg aaccttcgat cttgaagggc tatatggagc aattgaggag 2100

tgcctgatta atgatccctg ggttttgctt aatgcatctt ggttcaactc cttcctcaca 2160

catgcactaa gatagttgtg gcaatgctac tatttgctat ccatactgtc caaaaaagta 2220

ccttgtttct act 2233

<210> 126
<211> 2233
<212> DNA
<213> Influenza virus type A PA segment

<400> 126
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attgtcgagc ttgcggaaaa gacaatgaag gaatatgggg aagacccgaa aattgaaaca 120

aataagttcg ctgcaatatg cacacactta gaagtctgct tcatgtattc agacttccat 180

ttcattgacg aacgaggcga atcaataatt gtggaatctg gtgatccaaa tgcattgttg 240

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agcatctgca acacaacagg agtcgataaa cccaaatttc ttccggatct atacgactac 360

aaggaaaacc gattcactga aattggtgtg acacggaggg aagttcacat atattactta 420

gaaaaagcta acaagataaa atccgagaaa acacatatcc acatcttttc attcactgga 480

gaagaaatgg ccactaaagc tgactacacc cttgatgaag agagcagggc aagaataaaa 540

accagactat tcaccataag acaggaaatg gcaagcaggg gtctatggga ttcctttcgt 600

cagtccgaga gaggcgaaga gacaattgaa gaaagatttg aaatcacagg gaccatgcgt 660

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tatcaaagtg atgagccaga gctcagatcg atagcaagct ggatccagag tgagttcaac 1260

aaggcatgtg aattgaccga ttcgagctgg atagaactcg atgagatagg ggaagatgtt 1320

gccccaattg agcacattgc aagcatgaga aggaactact tcacagcgga agtgtctcat 1380

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gaaggaagaa ggaagacaaa cctgtatggg ttcattataa aaggaaggtc ccatttgaga 1560

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gaaaacagat cggagacatg gccaattgga gagtcaccta agggagtgga ggaaggctca 1920

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ccacaactcg aaggattttc agctgaatcg agaaaactac tactcattgt tcaagcactt 2040

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tgcctgatta atgatccctg ggttttgctt aatgcatctt ggttcaactc cttcctcaca 2160

catgcactaa aatagttgtg gcaatgctac tatttgctat ccatactgtc caaaaaagta 2220

ccttgtttct act 2233

<210> 127
<211> 2182
<212> DNA
<213> Influenza virus type A PA segment

<400> 127
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attgtcgagc ttgcggaaaa aacaatgaaa gagtatgggg aggacctgaa aatcgaaaca 120

aacaaatttg cagcaatatg cactcacttg gaagtatgct tcatgtattc agatttccac 180

ttcatcaatg agcaaggcga gtcaataatc gtagaacttg gtgatcctaa tgcacttttg 240

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agtatttgca acactacagg ggctgagaaa ccaaagtttc taccagattt gtatgattac 360

aaggaaaata gattcatcga aattggagta acaaggagag aagttcacat atactatctg 420

gaaaaggcca ataaaattaa atctgagaaa acacacatcc acattttctc gttcactggg 480

gaagaaatgg ccacaaaggc cgactacact ctcgatgaag aaagcagggc taggatcaaa 540

accaggctat tcaccataag acaagaaatg gccagcagag gcctctggga ttcctttcgt 600

cagtccgaga gaggagaaga gacaattgaa gaaaggtttg aaatcacagg aacaatgcgc 660

aagcttgccg accaaagtct cccgccgaac ttctccagcc ttgaaaattt tagagcctat 720

gtggatggat tcgaaccgaa cggctacatt gagggcaagc tgtctcaaat gtccaaagaa 780

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tgagttcaac aaggcatgcg aactgacaga ttcaagctgg atagagcttg atgagattgg 1260

agaagatgtg gctccaattg aacacattgc aagcatgaga aggaattatt tcacatcaga 1320

ggtgtctcac tgcagagcca cagaatacat aatgaagggg gtgtacatca atactgcctt 1380

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ccacttaagg aatgacaccg acgtggtaaa ctttgtgagc atggagtttt ctctcactga 1560

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tcaggctctt agggacaatc tggaacctgg gacctttgat cttgggggc tatatgaagc 2040

aattgaggag tgcctaatta atgatccctg ggttttgctt aatgcttctt ggttcaactc 2100

ttccttacac atgcattgag ttagttgtgg cagtgctact atttgctatc catactgtcc 2160

aaaaaagtac cttgtttcta ct 2182

<210> 128
<211> 2233
<212> DNA
<213> Influenza virus type A PA segment

<400> 128
agcgaaagca ggtactgatt caaaatggaa gattttgtgc gacaatgctt caatccgatg 60

attgtcgagc ttgcggaaaa ggcaatgaaa gagtatggag aggacctgaa aatcgaaaca 120

aacaaatttg cagcaatatg cactcacttg gaagtgtgct tcatgtattc agattttcac 180

ttcatcgatg agcaaggcga gtcaatagtc gtagaacttg gcgatccaaa tgcacttttg 240

aagcacagat ttgaaataat cgagggaaga gatcgcacaa tagcctggac agtaataaac 300

agtatttgca acactacagg ggctgagaaa ccaaagtttc taccagattt gtatgattac 360

aagaagaata gattcatcga aattggagta acaaggagag aagttcacat atactatctg 420

gaaaaggcca ataaaattaa atctgagaag acacacatcc acattttctc attcactggg 480

gaggaaatgg ccacaaaggc cgactacact ctcgatgaag aaagcagggc taggatcaaa 540

accaggctat tcaccataag acaagaaatg gctagcagag gcctctggga ttcctttcgt 600

cagtccgaga gaggcgaaga gacaattgaa gaaagatttg aaatcacagg aacaatgcgc 660

aagcttgccg accaaagtct cccgccaaac ttctccagcc ttgaaaattt tagagcctat 720

gtggatggat tcgaaccgaa cggctacatt gagggcaagc tttctcaaat gtccaaagaa 780

gtaaatgcta gaattgaacc ttttttgaaa tcaacaccac gaccacttag acttccggat 840

gggcctccct gttctcagcg gtccaaattc ctgctgatgg atgccttaaa attaagcatt 900

gaggacccaa gtcatgaggg agaggggata ccgctatatg atgcaatcaa atgcatgaga 960

acattctttg gatggaagga acccaatgtt gttaaaccac acgaaaaggg aataaatcca 1020

aattatcttc tgtcatggaa gcaagtactg gcagaactgc aggacattga gaatgaggag 1080

aaaattccaa ggactaaaaa tatgaagaaa acgagtcagt taaagtgggc acttggtgag 1140

aacatggcac cagaaaaggt agactttgac gattgtaaag atgtaggcga tttgaagcaa 1200

tatgatagtg atgaaccaga attgaggtcg cttgcaagtt ggattcagaa tgagttcaac 1260

aaggcatgtg aactgaccga ttcaagctgg atagagctcg atgagattgg agaagatgcg 1320

gctccaattg aacacattgc aagcatgaga aggaattatt tcacagcaga ggtgtctcat 1380

tgcagagcca cagaatacat aatgaagggg gtgtacatca atactgcctt gcttaatgca 1440

tcctgtgcag caatggatga tttccaatta attccaatga taagcaagtg tagaactaag 1500

gagggaaggc gaaagaccaa tttgtacggt ttcatcataa aaggaagatc ccacttaagg 1560

aatgacaccg atgtggtaaa ctttgtgagc atggagtttt ccctcactga cccaagactt 1620

gaaccacaca aatgggagaa gtactgtgtt cttgaggtag gagatatgct tctaagaagt 1680

gccataggcc atgtgtcaag gcctatgttc ttgtatgtga ggacaaatgg aacctcaaaa 1740

attaaaatga aatgggggat ggaaatgagg cgttgcctcc ttcagtcact tcaacaaatc 1800

gagagtatga ttgaagctga gtcctctgtc aaggagaaag acatgaccaa agagttcttt 1860

gaaaacaaat cagaaacatg gcccgttgga gagtccccca aaggagtgga ggaaggttcc 1920

attgggaagg tctgcagaac tttattggca aagtcggtat tcaacagctt gtatgcatct 1980

ccacaactgg aaggattttc agctgaatca agaaaactgc ttcttatcgt tcaggctctt 2040

agggacaacc tggaacctgg gacctttgat cttgggggc tatatgaagc aattgaggag 2100

tgcctgatta atgatccctg ggttttgctt aatgcttctt ggttcaactc cttcctcaca 2160

catgcattga gatagttgtg gcaatgctac tatttgctat ccatactgtc caaaaaagta 2220

ccttgtttct act 2233

<210> 129
<211> 2183
<212> DNA
<213> Influenza virus type A PA segment

<400> 129
agcgaaagca ggtactgatc caaaatggaa gaatttgtgc gacaatgctt caatccaatg 60

atcgtcgagc ttgcggaaaa gacaatgaaa gaatatggag aggacccgaa gattgaaaca 120

aacaaattcg cagcaatatg cacacatttg gaagtgtgtt tcatgtattc agatttccac 180

tttattgatg aacggggaga gtcaaagatt gtagaatctg gtgacccaaa tgcactcttg 240

aagcaccgat ttgagataat tgaaggaaga gatcgcacga tggcctggac ggtggtgaat 300

gtatgattat aaggagaacc gattcattga aattggagtg acaagaaggg aggtccacat 360

atactactta gaaaaagcca ataagataaa atctgagaag acacacatcc acatcttctc 420

attcactggg gaagaaatgg ccactaaggc ggactacact cttgatgaag agagcagagc 480

aaggatcaaa accaggctat tcaccataag acaagaaatg gccagtagag gcctctggga 540

ttcctttcgt cagtccgaga gaggcgaaga gacaattgaa gaaagatttg aaatcacagg 600

aaccatgcgc aggcttgccg aacaaagtct cccaccgaac ttctccagcc ttgaaaactt 660

tagagcctat gtggatggat tcaaaccgaa cggctgcatt gagggcaagc tttctcaaat 720

gtccaaagaa gtaaatgcaa gaatcgagcc attcttgaag acaacaccac gccctctcag 780

attacctgat gggcctccct gttctcagcg gtcaaaattc ctactgatgg atgctctgaa 840

attaagcatt gaagacccaa gtcatgaggg ggaggggata ccactacatg atgcaatcaa 900

atgcatgaag acattctttg gctggaaaga gcccaatatt gtcaaaccgc atgagaaggg 960

cataaatccc aactatctcc tggcttggaa ccaggtgcta gcagaactga aggatattga 1020

gaatgaggag aaaattccaa aaacaaaaaa tatgaagaaa acaagccagt taaagtgggc 1080

acttggtgag aacatggcac cagagaaagt agactttgag gattgcaagg acattagcga 1140

tctgaagcag tatgacagtg atgagccaga acagagatca ctagcgagtt ggatccagag 1200

tgaattcaac aaagcatgtg agctgaccga ttcaggttgg atagaacttg atgaaatagg 1260

agaagatgta gccccaatcg agcacattgc aagtatgagg agaaactatt tcacagcgga 1320

agtgtctcac tgcagggcaa cggagtacat aatgaaaggg gtatacataa acacggcctt 1380

gctcaatgca tcttgtgcag ctatggatga cttccagctg atcccaatga taagcaaatg 1440

caggaccaaa gaaggaagac ggaagacgaa tctgtatgga ttcattataa aaggaagatc 1500

tcacttgagg aatgatactg atgtggtgaa ttttgtgagc atggagttct ctctcactga 1560

cccgaggctt gagccacaca agtgggagaa gtattgtgtt cttgaaatag gagacatgct 1620

cctgcggact gcaataggcc aagtatcaag gcccatgttc ctgtatgtga gaaccaatgg 1680

aacctccaaa atcaagatga aatggggtat ggagatgaga cgttgccttc ttcagtccct 1740

tcaacaggtt gaaagcatgg ttgaggctga gtcctctgtc aaggagaaag acatgactaa 1800

ggaattcttt gaaaacaagt caaagacgtg gcccattgga gaatcaccta aaggagtgga 1860

agaaggttcc atcgggaaag tgtgcaggac cttactggcg aagtctgtat ttaacagctt 1920

atatgcatcc ccacaacttg agggattttc agcggaatct agaaaactgc tcctcattgt 1980

tcaggctctt agagacaacc tggaacctgg aaccttcgat cttggagggc tatatggagc 2040

aattgaggag tgcctgatta atgatccctg ggttttgctt aatgcatctt ggttcaactc 2100

cttcctcaca catgcactga aatagttgtg gcaatgctac tatttgctat ccatactgtc 2160

caaaaaagta ccttgtttct act 2183

<210> 130
<211> 2090
<212> DNA
<213> Influenza virus type A PA segment

<400> 130
atggaagact tcgtgcgaca atgcttcaat ccaatgattg tcgagcttgc ggaaaaggca 60

atgaaagaat atggagaggg cccgaaaatc gaaacaaaca aatttgcagc aatatgcact 120

catttggaag tgtgtttcat gtattcagac tttcacttca tcgatgagcg aggcgaatca 180

ataattgtag aatccggaga tccgaatgcc ctcttgaagc acagatttga aataattgag 240

ggaagagatc gcacaatggc ctggacagtg gtgaacagca tctgtaacac tacaggggtt 300

gagaagccaa ggtttctccc agatctatat gactacaagg agaacaggtt cattgagatt 360

ggagtgacaa ggagagaagt ccacatatac tacctggaaa aggccaataa aataaagtct 420

gagaagacac atatccacat cttctcgttc acaggagaag agatggccac aaaggctgac 480

tacactcttg atgaagaaag tagggccaga atcaaaacta gactgttcac cataaggcag 540

gaaatggcca gtagaggtct ctgggattcc tttcgtcagt ccgagagagg cgaagagaca 600

attgaagaaa gatttgaaat cacaggaaca atgcgcaggc ttgccgacca aagtctccca 660

ccgaacttct ccagccttga aaactttaga gcctatgtgg atggattcga accgaacggc 720

tgcattgagg gcaagctttc tcaaatgtcc aaagaagtga atgcaagaat tgaacccttt 780

ttgaagacaa caccacgccc actcaagcta ccagatgggc ctccctgctc ccagcggtcc 840

aaattcctgc taatggacgc tttgaaatta agcattgagg acccaagcca tgaaggagaa 900

gggataccgc tatatgatgc aatcaaatgc atgaaaacat tctttgggtg gaaagaaccc 960

aatattgtta aaccacatga aaaaggaata aatccgaatt acctcttggc atggaaacaa 1020

gtactagcgg aactacagga tcttgaaaat gaagagaaaa ttccaaagac taaaaacatg 1080

aagaaaacaa gccaattaaa gtgggcactt ggtgagaata tggcaccaga aaaagtggat 1140

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agatcgcttg caagttggat tcagagtgag ttcaataagg cgtgtgaact gactgattca 1260

agctggatag agcttgacga gattggggaa gatgttgccc caattgagca cattgcaagc 1320

atgaggagga attatttcac agcggaggtg tctcattgta gagccacaga atacataatg 1380

aaaggggtat acatcaatac tgccttgctc aatgcatcct gtgcggctat ggatgacttt 1440

caactgattc caatgatcag caagtgtaga actaaagagg gaagaagaaa gacaaatttg 1500

tatgggttca ttataaaagg gagatcccac ctgaggaacg acaccgatgt ggtaaacttt 1560

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tgtgttcttg aaatagggga catgcttcta agaactgcca taggccaagt ttcgaggccc 1680

atgttcctgt atgtgagaac gaatgggacc tccaaaatca aaatgaaatg ggggatggaa 1740

atgagacgct gtcttctcca gtcccttcaa caaattgaga gtatgattga agccgagtcc 1800

tctgtcaaag agaaggacat gaccaaaggg ggtggaggaa ggatccattg gaaaggtctg 1860

caggactctg ttggcaaagt ctgtattcaa cagcttgtac gcatctccac agctggaagg 1920

tttctcagct gaatcaagga aactgcttct tatcgttcag gctcttaggg acaacctgga 1980

acctggaacc tttgatcttg gaggattgca tgaagcaatt gaggagtgcc tgattaatga 2040

cccctgggtt ttgcttaatg catcttggtt taactccttc ctcacacatg 2090

<210> 131
<211> 2133
<212> DNA
<213> Influenza virus type A PA segment

<400> 131
agcaaaagca ggtactgatc caaaatggaa gactttgtgc gacaatgctt caatccaatg 60

atcgtcgagc ttgcggaaaa ggcgatgaaa gaatatggag aggacccgaa aattgaaaca 120

aacaaatttg cagcaatatg cactcacttg gaagtctgct tcatgtactc ggatttccac 180

tttattaatg aactgggcga gtcagtgatc atagagtctg gtgatccaaa tgctcttttg 240

aagcacagat ttgaaatcat tgaagggaga gatcgaacaa tggcatggac agtagtgaac 300

agtatctgca acaccacaag agctgaaaaa cccaagttcc tcccagattt gtacgactat 360

aaagagaaca ggtttgttga aattggtgtg acaaggagag aagttcacat atactacttg 420

gagaaagcca acaaaataaa gtctgagaaa acacatattc acattttctc atttacagga 480

gaggaaatgg ctacaaaagc ggattatacc cttgatgaag aaagtagagc caggatcaaa 540

accagactat tcaccataag acaagaaatg gccagcagag gcctttggga ctcctttcgt 600

cagtccgaga gaggcgaaga gacaattgaa gaaagatttg aaatcacagg gacaatgcgc 660

aggcttgccg attacagtct cccaccgaac ttctccagcc attttcaaag acaacacccc 720

ggccactcag gacaccgggt ggtccaccct gttatcagcg atccaaattc ttgctgatgg 780

atgctctgaa atttagcatt gaggatccaa gtcacgaggg agagggaata ccgctgtatg 840

atgccatcaa atgcatgaaa accttctttg gatggaaaga gcccaatatt gttaaaccac 900

atgaaaaggg tataaaccca aactatctcc aggcttggaa gcaagtgtta gcagaactac 960

aggacctcga aaacgaagaa aaaatcccta agaccaagaa tatgaaaaaa acaagtcaat 1020

tgaaatgggc acttggtgag aatatggcgc cagagaaagt ggattttgag gattgtaaag 1080

acatcagtga tttgaaacag tatgacagtg atgagccaga aacaaggtcc cttgcaagtt 1140

ggattcaaag tgagttcaac aaagcttgtg agctgacaga ttcaagctgg atagagctcg 1200

atgaaattgg ggaggatgtt gccccaatag aacacattgc gagcatgagg aggaattatt 1260

ttactgctga ggtttcccat tgtagagcaa ctgaatatat aatgaaggga gtatacatca 1320

acactgctct actcaatgca tcctgcgctg cgatggatga cttccaatta atcccgatga 1380

taagcaaatg caggaccaag gaagggagaa ggaagacaaa tttgtatgga ttcatcataa 1440

agggaaggtc ccatttaaga aatgacactg acgtggtaaa ctttgtaagc atggagtttt 1500

ctctcaccga tccaagactt gagccacaca attgggagaa gtactgtgtt ctagaaatcg 1560

gagacatgct cctaagaact gctgtaggcc aagtgtcaag acccatgttt ttgtatgtaa 1620

ggaccaatgg gacctctaaa attaaaatga aatggggaat ggaaatgagg cgctgcctcc 1680

ttcagtctct acagcagatt gaaagcatga ctgaagctga gtcctcagtc aaagaaaagg 1740

acatgaccaa agaattcttt gagaacaaat cggagacatg gcctatagga gagtccccca 1800

aaggagtgga agaaggctca atcgggaaag tttgcaggac cttgttagca aaatctgtgt 1860

ttaacagttt atatgcatct ccacaactcg aagggttttc agctgaatct aggaaaatac 1920

ttctcattgt tcaggccctt agggacaacc tggaacctgg aacctttgat attgggggc 1980

tatatgaatc aattgaggag tgtctgatta atgatccctg ggttttgctc aatgcatctt 2040

ggttcaactc cttccttaca catgcactaa agtagttgtg gcaatgctac tatttgctat 2100

ccatactgtc caaaaaagta ccttgtttct act 2133

<210> 132
<211> 2233
<212> DNA

<213> Influenza virus type A PA segment

<400> 132

agcaaaagca ggtactgatt caaaatggaa gactttgtgc gacaatgctt caatccaatg 60

atcgtcgagc ttgcggaaaa ggcaatgaaa gaatatggag aggatccaaa aatcgagaca 120

aacaaattcg ctgcaatatg cacacacctg gaagtgtgtt tcatgtattc agacttccat 180

ttcattgatg aacggggtga gtcgataatt gttgagtctg gtgatccaaa tgcactctta 240

aaacatcgat ttgaaataat cgaaggaaga gaccgtacta tggcctggac agtggtgaat 300

agcatttgca acaccacagg agttgagaag ccaaagtttc ttccggactt atatgattat 360

aaagaaaatc gtttcattga aattggagtg acaaggaggg aggtccatat atactatcta 420

gaaaaggcca ataagataaa gtctgagaag acacacatcc atatcttttc attcactgga 480

gaagaaatgg ccacaaaagc agactacact cttgatgaag agagtagagc aaggatcaaa 540

accagactat tcactataag acaagaaatg gccagtagag gtctctggga ttcctttcgt 600

cagtccgaga gaggcgaaga gacaattgaa gaaagatttg aaattacagg aaccatgcgc 660

aggctcgccg accaaagtct cccaccgaac ttctccagcc ttgaaaactt tagagcctat 720

gtggatggat tcgaaccgaa cggctgcatt gagggcaagc tttctcaaat gtccaaagaa 780

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aacatggcac cagagaaagt ggactttgaa gattgcaagg atgtcagcga tttgaaacag 1200

tatgacagcg atgagccaga acaaaggtcg ctagcaagtt gggtccaaag tgaattcaac 1260

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tgcagggcaa cagagtacat aatgaaggga gtgtacataa actcagcttt actcaacgcc 1440

tcttgtgcag ccatggatga ttttcagttg atcccaatga taagcaaatg cagaaccaaa 1500

gaaggacgac ggaaaacaaa tttgtatgga ttcatcataa agggaaggtc tcatttgagg 1560

aatgatactg atgtggtgaa ttttgtgagc atggaatttt ctcttactga ccctagatta 1620

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atcaaaatga aatggggtat ggagatgagg cgttgtcttc ttcaatccct ccagcaaatc 1800

gaaagcatga ttgaggccga gtcctctgtc aaggaaaaag acatgactaa agaattcttt 1860

gaaaacaagt cggagacatg gcccattgga gaatcaccca aaggagtaga agaaggttcc 1920

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ccacaacttg aaggtttttc agctgagtca agaaagctgc ttctcattgt tcaggcactt 2040

agggacaacc tggaacctgg caccttcgat cttgggggc tatatgaagc aattgaggag 2100

tgcctgatta atgatccctg ggttttgctt aatgcatctt ggttcaactc cttcctcaca 2160

catgcactga aatagttgtg gcaatgctac tatttgctat acatcctgtc caaaaaagta 2220

ccttgtttct act 2233

<210> 133
<211> 1635
<212> DNA
<213> Influenza virus type A PA Segment

<400> 133
agcaaaagca gggcaaggat caaaactagg ctgttcacca taagacagga actggctagc 60

aggggtctat gggattcctt tcgtcagtcc gagagaggcg aagagacaat tgaagaaaga 120

tttgaaatca caggaacaat gcgcaggctt gccgaccaaa gtctcccacc gaatttctcc 180

agccttgaaa attttagagc ctatgtggat ggattcgaac cgaacggctg cattgagggc 240

aagctttctc agatgtcaaa agaagtaacg gccagaattg agccctttct taaaacaaca 300

ccacgtcctc taagactgcc gggtggacct ccctgttccc aaaggtcaaa attcttactg 360

atggatgctc tgaaattaag cattgaggac ccgagtcatg agggagaggg gataccgctg 420

tatgatgcga tcaaatgcat gaaaacattt ttcggctgga aagagcccaa aattatcaag 480

tcacatgaga agggtataaa cccaaattat ctcctagctt ggaagcaggt gctggcagag 540

ctccaggaca ttgaaaatga tgaaaagatc ccaaaaacaa agaacatgaa gaaaacaagc 600

caattaaagt gggcattagg tgagaacatg gcaccagaga aagtggactt tgaggattgc 660

aaagacgtta gtgacctgaa acaatatgat agtgatgaac cagagcccaa atcgctagca 720

agttggatcc agagtgaatt taacaaggca tgtgagttga ccgattcaag ctgggtagaa 780

cttgatgaaa taggagaaga tgttgctcca atcgagcaca ttgcgagtat gagaaggaat 840

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attaacacag cgttgctcaa tgcatcttgt gcagccatgg atgacttcca attgattcca 960

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atcaagggaa ggtcccattt gaggaatgat actgatgtgg taaactttgt gagcatggaa 1080

ttttctctta cagacccgaa actggaacca cacaagtggg agaagtactg tgttcttgaa 1140

gtaggggaca tgctcctgag aacttcaata ggccaggtgt caaggcccat gttcctatac 1200

gtgagaacca atggaacctc caaaattaaa atgaaatggg gaatggagat gaggcgttgc 1260

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aaggacatga ccaaagaatt ttttgaaaac aagtcggaga cgtggccgat tggagagtca 1380

cctaagggag tggaggaagg ctccatcggg aaggtgtgca ggaccttact agcaaagtct 1440

gtgttcaaca gcttgtatgc atctccacaa ctcgaggggt tttcagctga atcaagaaaa 1500

ctgttactca ttgttcaggc acttagggac aacctggaac ctggaacctt cgacattgaa 1560

ggactgtatg aagcaattga ggagtgcctg attaatgatc cctgggtttt gcttaatgca 1620

tcttggttca actcc 1635

<210> 134
<211> 50
<212> DNA
<213> Influenza virus type A NP segment

<400> 134
aatgaaggat cttatttctt cggagacaat gcagaggagt acgacaatta 50

<210> 135
<211> 50
<212> DNA
<213> Influenza virus type A NP Segment

<400> 135
aatgaaggat cttatttctt cggagacaat gcagaggagt acgacaatta 50

<210> 136
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<213> Influenza virus type A NP segment

<400> 136
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<210> 137
<211> 50
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<213> Influenza virus type A NP segment

<400> 137
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<210> 138
<211> 50
<212> DNA
<213> Influenza virus type A NP segment

<400> 138
aatgaaggat cttatttctt cggagacaat gcagaggagt acgacaatta 50

<210> 139

<211> 50
<212> DNA
<213> Influenza virus type A NP segment

<400> 139
aatgaaggat cttatttctt cggagacaat gcagaggaat atgacaattg 50

<210> 140
<211> 50
<212> DNA
<213> Influenza virus type A NP segment

<400> 140
aacgagggat cttatttctt cggagacaat gcagaggaat atgacaatta 50

<210> 141
<211> 50
<212> DNA
<213> Influenza virus type A NP segment

<400> 141
aatgaagggt cttatttctt cggagacaat gctgaggagt ttgacagtta 50

<210> 142
<211> 50
<212> DNA
<213> Influenza virus type A NP segment

<400> 142
aatgagcgat cttatttctt cggagacaat gctgaggagt atgacaattg 50

<210> 143
<211> 50
<212> DNA
<213> Influenza virus type A NP segment

<400> 143
aatgaaggat cttatttctt cggagacaat gcataggagt atgacaatta 50

<210> 144
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<212> DNA
<213> Influenza virus type A NP segment

<400> 144
aacgaagggt cttatttctt cggagacaat gcagaggaat atgacaatta 50

<210> 145
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<212> DNA
<213> Influenza virus type A vRNA

<400> 145
ggaacaaaga uga 13

<210> 146

<211> 12
<212> DNA
<213> Influenza virus type A vRNA

<400> 146
ucgcuuucgu cc 12

<210> 147
<211> 12
<212> DNA
<213> Influenza virus type a mRNA

<400> 147
agcgaaagca gg 12

<210> 148
<211> 12
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<213> Influenza virus type A RNA

<400> 148
agcgaaagca gg 12

<210> 149
<211> 13
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<213> Influenza virus type A RNA

<400> 149
ccuuguuucu acu 13

<210> 150
<211> 23
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<213> Artificial siRNA

<220>
<223> targeted to CD8 gene human

<400> 150
gcuacaacua cuacaugacd tdt 23

<210> 151
<211> 23
<212> DNA
<213> Artificial siRNA

<220>
<223> targeted to CD8 gene human

<400> 151
dtdtcgaugu ugaugaugua cug 23

<210> 152
<211> 62
<212> DNA
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<220>
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<400> 152
cgggggugcu acaacuacua caugacgcag guccagucau guaguaguug uagcuucccc 60

ug 62

<210> 153
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<220>
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<400> 153
ggaucuuauu ucuucggagd tdt 23

<210> 154
<211> 23
<212> DNA
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<220>
<223> targeted to influenza virus type A NP segment

<400> 154
dtdtccuaga auaaagaagc cuc 23

<210> 155
<211> 60
<212> DNA
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<220>
<223> targeted to influenza virus type A NP segment

<400> 155
cgggguggau cuuauuucuu cggaggcagg uccacuccga agaaauaaga uccuucccug 60

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<211> 23
<212> DNA
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<220>
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<400> 156
ugcgcuccug gacguagccd tdt 23

<210> 157
<211> 23
<212> DNA
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<220>
<223> targeted to Aequonia victoria green fluorescent protein

<400> 157
dtdtacgcga ggaccugcau cgg 23

<210> 158
<211> 60
<212> DNA
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<220>
<223> targeted to Aequonia victoria green fluorescent protein

<400> 158
cgggguugcg cuccuggacg uagccgcagg uccaggcuac guccaggagc gcauucccug 60

<210> 159
<211> 119
<212> DNA
<213> Artificial shRNA

<220>
<223> construct targeted to influenza virus type A NP segment and green fluorescent protein

<400> 159
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ccaggcuacg uccaggagcg cauucccugu ccacuccgaa gaaauaagau ccuucccug 119

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<220>
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<400> 160
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ccacuccgaa gaaauaagau ccuucccugu ccaggcuacg uccaggagcg cauucccug 119

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<220>
<223> influenza virus type A M vRNA

<400> 161
cgctcagaca tgagaacaga atgg 24

<210> 162
<211> 36

<212> DNA
<213> Artificial primer

<220>
<223> influenza virus type A M cRNA

<400> 162
atatcgtctc gtattagtag aaacaaggta gttttt 36

<210> 163
<211> 24
<212> DNA
<213> Artificial primer

<220>
<223> influenza virus type A M RNA

<400> 163
cgctcagaca tgagaacaga atgg 24

<210> 164
<211> 23
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<220>
<223> influenza virus type A M RNA

<400> 164
taactagcct gactagcaac ctc 23

<210> 165
<211> 25
<212> DNA
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<220>
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<400> 165
gtgcagaaat cagcccgaat ggttc 25

<210> 166
<211> 33
<212> DNA
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<220>
<223> influenza virus type A PB1 cRNA

<400> 166
atatcgtctc gtattagtag aaacaaggca ttt 33

<210> 167
<211> 24
<212> DNA
<213> Artificial primer

<220>
<223> influenza virus type A PB2 vRNA

<400> 167
gcgaaaggag agaaggctaa tgtg 24

<210> 168
<211> 34
<212> DNA
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<220>
<223> influenza virus type A PB2 cRNA

<400> 168
atatggtctc gtattagtag aaacaaggtc gttt 34

<210> 169
<211> 25
<212> DNA
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<220>
<223> influenza virus type A PA vRNA

<400> 169
gcttcttatc gttcaggctc ttagg 25

<210> 170
<211> 33
<212> DNA
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<220>
<223> influenza virus type A PA cRNA

<400> 170
atatcgtctc gtattagtag aaacaaggta ctt 33

<210> 171
<211> 24
<212> DNA
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<220>
<223> influenza virus type A PB 1 RNA

<400> 171
cggattgatg cacggattga tttc 24

<210> 172
<211> 27
<212> DNA
<213> Artificial primer

<220>
<223> influenza virus type A PB 1 RNA

<400> 172
gacgtctgag ctcttcaatg gtggaac 27

<210> 173
<211> 24
<212> DNA
<213> Artificial primer

<220>
<223> influenza virus type A PB2 RNA

<400> 173
gcgaaaggag agaaggctaa tgtg 24

<210> 174
<211> 24
<212> DNA
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<220>
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aatcgctgtc tggctgtcag taag 24

<210> 175
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<220>
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<400> 175
gcttcttatc gttcaggctc ttagg 25

<210> 176
<211> 25
<212> DNA
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<220>
<223> influenza virus type A PA RNA

<400> 176
ccgagaagca ttaagcaaaa cccag 25

<210> 177
<211> 20
<212> DNA
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<220>
<223> gamma action

<400> 177
tctgtcaggg ttggaaagtc 20

<210> 178
<211> 20
<212> DNA
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<220>
<223> gamma action

<400> 178
aaatgcaaac cgcttccaac 20

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<220>
<223> Oligenucleotide for plasmid construction

<400> 179
tggatcttat ttcttcggag attcaagaga tctccgaaga aataagatcc ttttttc 57

<210> 180
<211> 61
<212> DNA
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<220>
<223> Oligenucleotide for plasmid construction

<400> 180
tcgagaaaaa aggatcttat ttcttcggag atctcttgaa tctccgaaga aataagatcc 60

a 61

<210> 181
<211> 55
<212> DNA
<213> Artificial

<220>
<223> Oligenucleotide for plasmid construction

<400> 181
tgatctgttc caccattgaa ttcaagagat tcaatggtgg aacagatctt ttttc 55

<210> 182
<211> 59
<212> DNA
<213> Artificial

<220>
<223> Oligenucleotide for plasmid construction

<400> 182
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<210> 183
<211> 56
<212> DNA
<213> Artificial

<220>
<223> Oligenucleotide for plasmid construction

<400> 183
tgcgataata taactgcaag attcaagaga tcttgcagtt atattatcgt tttttc 56

<210> 184
<211> 60
<212> DNA
<213> Artificial

<220>
<223> Oligenucleotide for plasmid construction

<400> 184
tcgagaaaaa acgataatat aactgcaaga tctcttgaat cttgcagtta tattatcgca 60

<210> 185
<211> 19
<212> DNA
<213> Respiratory syncitial virus siRNA

<400> 185
cgataatata actgcaaga 19

<210> 186
<211> 19
<212> DNA
<213> Respiratory syncitial virus siRNA

<400> 186
tcttgcagtt atattatcg 19

<210> 187
<211> 55
<212> DNA
<213> Artificial

<220>
<223> Oligenucleotide for plasmid construction

<400> 187
tgcaattgag gagtgcctga ttcaagagat caggcactcc tcaattgctt ttttc 55

<210> 188
<211> 24
<212> DNA
<213> Artificial Sequence (siRNA)

<220>
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<400> 188

ggaucuuauu ucuucggaga dtdt 24

<210> 189
<211> 24
<212> DNA
<213> Artificial Sequence (siRNA)

<220>
<223> targeted to influenza virus type A NP segment

<400> 189
ucuccgaaga aauaagaucc dtdt 24

<210> 190
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<212> DNA
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<220>
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<400> 190
gaaagcaggu caauuauaud tdt 23

<210> 191
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<220>
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<400> 191
auauaauuga ccugcuuucd tdt 23

<210> 192
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<220>
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<400> 192
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<210> 193
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<220>
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<400> 193
cauauugaau auaauugacd tdt 23

<210> 194
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cucgcacccg cgagauacud tdt 23

<210> 195
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aguaucucgc gggugcgagd tdt 23

<210> 196
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<400> 196
auaaucaaga aguacacaud tdt 23

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<220>
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<400> 197
auguguacuu cuugauuaud tdt 23

<210> 198
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<220>
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<400> 198
ugaaauggau gauggcaaud tdt 23

<210> 199
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<220>
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<210> 200
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<220>
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<400> 200
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<210> 201
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<210> 202
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<220>
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uaugcaaggc ugcaaugggd tdt 23

<210> 203
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<220>
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<400> 203
cccauugcag ccuugcauad tdt 23

<210> 204
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<220>

<223> targeted to influenza virus type A PB2 segment

<400> 204
caucgucaau gaugugggad tdt 23

<210> 205
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<220>
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<400> 205
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<210> 206
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<212> DNA
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<220>
<223> influenza virus type A PB1 segment

<400> 206
aaauaccugc agaaaugcud tdt 23

<210> 207
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<220>
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<400> 207
agcauuucug cagguauuud tdt 23

<210> 208
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<220>
<223> influenza virus type A PB1 segment

<400> 208
aacaauauga uaaacaaugd tdt 23

<210> 209
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<220>
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<400> 209

cauuguuuau cauauuguud tdt 23

<210> 210
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<220>
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<400> 210
cgaaagcagg uacugauccd tdt 23

<210> 211
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<220>
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ggaucaguac cugcuuucgd tdt 23

<210> 212
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<220>
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<400> 212
aggcuauuca ccauaagacd tdt 23

<210> 213
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<220>
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<400> 213
gucuuauggu gaauagccud tdt 23

<210> 214
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<220>
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ccauugcugc acaagaugcd tdt 23

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<220>
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guuguggcag ugcuacuaud tdt 23

<210> 219
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<400> 219
auaguagcac ugccacaacd tdt 23

<210> 220
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<400> 220
uacuauuugc uauccauacd tdt 23

<210> 221
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<400> 221
guauggauag caaauaguad tdt 23

<210> 222
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<220>
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<400> 222
uagauaauca cucacugagd tdt 23

<210> 223
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<220>
<223> influenza virus type A NP segment

<400> 223
cucagugagu gauuaucuad tdt 23

<210> 224
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cgucccaagg caccaaacgd tdt 23

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gcauugucuc cgaagaaaud tdt 23

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<400> 229
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<210> 230
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<400> 230

gagtaatgaa ggatcttatd tdt 23

<210> 231
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ataagatcct tcattactcd tdt 23

<210> 232
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<220>
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<400> 232
cgaaagcagg uagauauugd tdt 23

<210> 233
<211> 23
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<220>
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<400> 233
caauaucuac cugcuuucgd tdt 23

<210> 234
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<220>
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<400> 234
uagauauuga aagaugagud tdt 23

<210> 235
<211> 23
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<220>
<223> influenza virus type A M segment

<400> 235
acucaucuuu caauaucuad tdt 23

<210> 236
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<220>
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<400> 236
ucauggaaug gcuaaagacd tdt 23

<210> 237
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<220>
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<400> 237
gucuuuagcc auuccaugad tdt 23

<210> 238
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<220>
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<400> 238
accaauccug ucaccucugd tdt 23

<210> 239
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<220>
<223> influenza virus type A M segment

<400> 239
cagaggugac aggauuggud tdt 23

<210> 240
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<220>
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<400> 240
uguguucacg cucaccgugd tdt 23

<210> 241
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<213> Artificial Sequence (siRNA)

<220>
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cacggugagc gugaacacad tdt 23

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<220>
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<400> 242
cagugagcga ggacugcagd tdt 23

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<220>
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<400> 243
cugcaguccu cgcucacugd tdt 23

<210> 244
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<220>
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<400> 244
gacgcuuugu ccaaaaugcd tdt 23

<210> 245
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<220>
<223> influenza virus type A M segment

<400> 245
gcauuuugga caaagcgucd tdt 23

<210> 246
<211> 23
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<220>

<223> influenza virus type A M segment

<400> 246
gucaggcuag gcaaauggud tdt 23

<210> 247
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<220>
<223> influenza virus type A M segment

<400> 247
accauuugcc uagccugacd tdt 23

<210> 248
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<220>
<223> influenza virus type A M segment

<400> 248
uucuugaaaa uuugcaggcd tdt 23

<210> 249
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<220>
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<400> 249
gccugcaaau uuucaagaad tdt 23

<210> 250
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<220>
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<400> 250
ucauugggau cuugcacuud tdt 23

<210> 251
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<220>
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<400> 251

aagugcaaga ucccaaugad tdt 23

<210> 252
<211> 23
<212> DNA
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<220>
<223> targeted to influenza virus type A M segment

<400> 252
uguggauucu ugaucgucud tdt 23

<210> 253
<211> 23
<212> DNA
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<220>
<223> targeted to influenza virus type A M segment

<400> 253
agacgaucaa gaauccacad tdt 23

<210> 254
<211> 23
<212> DNA
<213> Artificial Sequence (siRNA)

<220>
<223> targeted to influenza virus type A M segment

<400> 254
ugucagcaua gagcuggagd tdt 23

<210> 255
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<212> DNA
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<220>
<223> targeted to influenza virus type A M segment

<400> 255
cuccagcucu augcugacad tdt 23

<210> 256
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<220>
<223> targeted to influenza virus type A M segment

<400> 256
gtcgaaacgc ctatcagaad tdt 23

<210> 257
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<220>
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<400> 257
uucugauagg cguuucgacd tdt 23

<210> 258
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<213> Artificial Sequence (siRNA)

<220>
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aaaagcaggg ugacaaagad tdt 23

<210> 259
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<220>
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ucuuugucac ccugcuuuud tdt 23

<210> 260
<211> 23
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<220>
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<400> 260
gcagggugac aaagacauad tdt 23

<210> 261
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<220>
<223> targeted to influenza virus type NS segment

<400> 261
uaugucuuug ucacccugcd tdt 23

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<211> 23
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<213> Artificial Sequence (siRNA)

<220>
<223> targeted to influenza virus type A NS segment

<400> 262
ggaugucaaa aaugcaguud tdt 23

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<220>
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<210> 264
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<210> 266
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<220>
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<210> 268
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<400> 268
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<210> 269
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<220>
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<400> 269
gacgaucaag aauccacaad tdt 23

<210> 270
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<212> DNA
<213> Artificial

<220>
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<400> 270
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<210> 271
<211> 51
<212> DNA
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<220>
<223> targeted to influenza virus type A NP segment

<400> 271
ggaucuuauu ucuucggaga uucaagagau cuccgaagaa auaagauccu u 51